Amendments to the Claims

Please amend the claims as follows:

1. (Original). An FrpB protein having one or more deletions of non-conserved amino acids compared to a corresponding wild-type FrpB protein.

2. (Original). An FrpB protein in which one or more of the amino acids of at least one of its loops has been deleted.

3. (Previously presented). The protein according to claim 1 which is cross-protective.

4. (Previously presented). The protein according to claim 1 in which one or more of the amino acids of at least 2 loops have been deleted.

5. (Previously presented). The protein according to claim 1 in which one or more of the amino acids of loop 7 and/or 5 have been deleted.

6. (Currently amended). The protein according to claim 1 in which one or more of the amino acids of any one or more of loops 1, 2, 3, 4, 6, 8, 9, 10, 11, 12 and 13 have been deleted.

7. (Previously presented). The protein according to claim 1 in which 11 to 33 amino acids have been deleted from loop 7.

8. (Previously presented). The protein according to claim 1 in which 23-33 amino acids have been deleted from loop 7.

9. (Previously presented). The protein according to claim 1 in which about 28 amino acids have been deleted from loop 7.

10. (Previously presented). The protein according to claim 1 in which 18-29 amino acids have been deleted from loop 5.

11. (Previously presented). The protein according to claim 1 in which 19-29 amino acids have been deleted from loop 5.

12. (Previously presented). The protein according to claim 1 in which 24 amino acids have been deleted from loop 5.

13. (Previously presented). The protein according to claim 1 in which, with reference to FrpB strain H44/76, the amino acid deletion is made in the range of amino acids 376-413, or a corresponding deletion made, from loop 7.

14. (Previously presented). The protein according to claim 1 in which, with reference to FrpB strain H44/76, the amino acid deletion is made in the range of amino acids 381-408, or a corresponding deletion made, from loop 7.

15. (Previously presented). The protein according to claim 1 in which, with reference to FrpB strain H44/76, an amino acid sequence comprising TTEEKNGQKVDKPMEQQMKDRADEDTVH has been deleted, or a corresponding deletion made, from loop 7.

16. (Previously presented). The protein according to claim 1 in which, with reference to FrpB strain H44/76, the amino acid deletion is made in the range of amino acids 247-280, or a corresponding deletion made, from loop 5.

17. (Previously presented). The protein according to claim 1 in which, with reference to FrpB strain H44/76, the amino acid deletion is made in the range of amino acids 252-275, or a corresponding deletion made, from loop 5.

18. (Previously presented). The protein according to claim 1 in which, with reference to FrpB strain H44/76, an amino acid sequence comprising QHRGIRTVREEFTVGDKSSRINID has been deleted, or a corresponding deletion made, from loop 5.

19. (Previously presented). The protein of claim 1 in which the deleted sequence is replaced by another amino acid sequence.

20. (Original). The protein of claim 19 in which the sequence is deleted by mutagenesis.

21. (Previously presented). A polynucleotide encoding the protein of claim 20.

22. (Previously presented). An expression vector comprising the polynucleotide of claim 21.

23. (Original). A host cell comprising the expression vector of claim 22.

24. (Previously presented). A method for producing the protein of claim 1 comprising: culturing the host cell of claim, and recovering the expressed protein.

25. (Original). A method for refolding an FrpB protein comprising contacting the FrpB protein with an alkaline refolding buffer comprising 3-dimethyldodecylammoniopropanesulfonate (Zwittergent 3-12 or SB-12).

26. (Previously presented). A method according to claim 25 wherein the protein is a protein according to claim 1.

27. (Previously presented). A method according to claim 25 wherein the refolding buffer comprises ethanolamine and SB-12.

28. (Original). A method according to claim 27 wherein the ethanolamine is about 20mM ethanolamine.

29. (Previously presented). A method according to claim 25 wherein the refolding buffer has pH11.

30. (Previously presented). A method according to claim 25 wherein the SB-12 is 0.2% SB-12.

31. (Previously presented). A method according to claim 25 wherein the SB-12 is 0.5% SB-12.

32. (Previously presented). A method according to claim 25 wherein the refolding buffer further comprises guanidium chloride, NaCl and/or urea.

33. (Original). A method according to claim 32 wherein the refolding buffer further comprises guanidium chloride.

34. (Original). A method according to claim 33 wherein the refolding buffer further comprises 0.4M guanidium chloride.

35. (Previously presented). A method of claim 25 comprising the following steps:

a. optionally expressing an FrpB protein in a host cell;

optionally breaking the host cell to obtain an inclusion body comprising the FrpB protein;

optionally washing the inclusion body;

b. optionally solubilisation of at least part of the inclusion body and the FrpB protein (preferably with Guanidinium hydrochloride);

c. contacting the solubilised FrpB protein with the refolding buffer; and

d. optionally removing (or changing) the refolding buffer from the FrpB protein.

36. (Previously presented). A refolding buffer comprising ethanolamine, SB-12 and, optionally, guandinium chloride for use in the method of claim 25.

37. (Previously presented). An isolated, refolded FrpB protein obtained or obtainable by the method of claim 25.

38. (Previously presented). A pharmaceutical composition comprising at least one FrpB protein of claim 1 or 37, and a pharmaceutically acceptable carrier.

39. (Original). A pharmaceutical composition according to claim 38 wherein at least 30%, 50%, 70%, or 90% of the FrpB protein present in the composition is refolded.

40. (Previously presented). A pharmaceutical composition according to claim 38 in the form of a vaccine.

41. (Previously presented). The pharmaceutical composition of claim 38 comprising a FrpB protein derived from *Neisseria meningitidis*.

42. (Previously presented). The pharmaceutical composition of claim 38 comprising a FrpB protein derived from *Neisseria gonorrhoeae*.

43. (Previously presented). The pharmaceutical composition according to claim 38 wherein said composition comprises at least one other Neisserial antigen.

44. (Original). The pharmaceutical composition of claim 43 comprising at least one other Neisserial antigen derived from *Neisseria gonorrhoeae*.

45. (Previously presented). The pharmaceutical composition of claim 43 comprising at least one other Neisserial antigen derived from *Neisseria meningitidis*.

46. (Previously presented). The pharmaceutical composition of claim 38 in the form of a subunit composition.

47. (Previously presented). The pharmaceutical composition of claim 38 in the form of an outer membrane vesicle preparation, or a mixed subunit plus outer membrane vesicle preparation.

48. (Previously presented). A pharmaceutical composition of claim 38 further comprising at least one other Neisserial antigen selected from the group consisting of:

a. at least one Neisserial adhesin selected from the group consisting of FhaB, NspA, Hsf, NadA, PilC, Hap, MafA, MafB, Omp26, NMB0315, NMB0995 and NMB1119;
b. at least one Neisserial autotransporter selected from the group consisting of Hsf, Hap, IgA protease, AspA and NadA;
c. at least one Neisserial toxin selected from the group consisting of FrpA, FrpC, FrpA/C, VapD, NM-ADPRT, and either or both of LPS immunotype L2 and LPS immunotype L3;
d. at least one Neisserial Fe acquisition protein selected from the group consisting of TbpA high, TbpA low, TbpB high, TbpB low, LbpA, LbpB, P2086, HpuA, HpuB, Lipo28, Sibp, FbpA, BfrA, BfrB, Bcp, NMB0964 and NMB0293; and
e. at least one Neisserial membrane associated protein, preferably outer membrane protein, selected from the group consisting of PldA, NspA, TspA, FhaC, NspA, TbpA(high), TbpA(low), LbpA, HpuB, TdfH, PorB, HimD, HisD, GNA1870, OstA, HlpA, MltA, NMB 1124, NMB 1162, NMB 1220, NMB 1313, NMB 1953, HtrA, TspB, PilQ and OMP85.

49. (Previously presented). The pharmaceutical composition of claim 38 further comprising one or more bacterial capsular polysaccharides or oligosaccharides.

50. (Currently amended). The pharmaceutical composition of claim 49 wherein the one or more capsular polysaccharides or oligosaccharides is derived from bacteria selected from the group consisting of *Neisseria meningitidis* serogroup A, C, Y, and/or W-135, *Haemophilus influenzae* b, *Streptococcus pneumoniae*, Group A Streptococci, Group B Streptococci, *Staphylococcus aureus* and *Staphylococcus epidermidis*, and are preferably conjugated to a source ~~of~~ of T-helper epitopes.

51. (Cancelled).

52. (Previously presented). Use of an FrpB protein of claim 1 or claim 37 in the preparation of a medicament for treatment or prevention of Neisserial infection.

53. (Previously presented). A method of preventing or treating Neisserial infection by administering an FrpB protein of claim 1 or claim 37 to a patient in need thereof.

54. (Previously presented). The method of claim 52 in which *Neisseria meningitidis* infection is prevented or treated.

55. (Previously presented). The method of claim 52 in which *Neisseria gonorrhoeae* infection is prevented or treated.

56. (Previously presented). An antibody immunospecific for the FrpB protein as claimed in claim 1 or claim 37.

57. (Original). A pharmaceutical composition useful in treating humans with a Neisserial disease comprising at least one antibody according to claim 56 and a suitable pharmaceutical carrier.

58. (Previously presented). Use of the antibody of claim 56 in the manufacture of a medicament for the treatment or prevention of Neisserial disease.

59. (Currently amended). The use of claim 58 in which *Neisseria meningitidis* infection is prevented or treated.

60. (Previously presented). The use of claim 58 in which *Neisseria gonorrhoeae* infection is prevented or treated.

61. (Previously presented). A method of diagnosing a Neisserial infection, comprising the steps of identifying an FrpB protein, or an antibody thereto, within a biological sample from an animal suspected of having such an infection using a FrpB protein as claimed in claim 1 or claim 37, or an antibody as claimed in claim 56.

62. (Original). The method of claim 61 in which *Neisseria meningitidis* infection is diagnosed.

63. (Previously presented). The method of claim 61 in which *Neisseria gonorrhoeae* infection is diagnosed.